



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2012-0418; Directorate Identifier 2012-NE-12-AD; Amendment 39-17064; AD 2012-11-01]

RIN 2120-AA64

Airworthiness Directives; Rolls-Royce plc Turbofan Engines

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are adopting a new airworthiness directive (AD) for all Rolls-Royce plc (RR) RB211-Trent 800 series turbofan engines. This AD requires removal from service of certain critical engine parts based on reduced life limits. This AD was prompted by RR adding a new flight profile and an associated set of life limits. We are issuing this AD to prevent the failure of critical rotating parts, which could result in uncontained failure of the engine and damage to the airplane.

DATES: This AD becomes effective [Insert date 15 days after date of publication in the FEDERAL REGISTER].

We must receive comments on this AD by [Insert date 45 days after date of publication in the FEDERAL REGISTER].

ADDRESSES: You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov> and follow the instructions for sending your comments electronically.

- Mail: U.S. Department of Transportation, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12-140, Washington, DC 20590-0001.

- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

- Fax: 202-493-2251.

For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-245418 or e-mail from http://www.rolls-royce.com/contact/civil_team.jsp, or download the publication from <https://www.aeromanager.com>. You may review copies of the referenced service information at the FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA. For information on the availability of this material at the FAA, call 781-238-7125.

Examining the AD Docket

You may examine the AD docket on the Internet at <http://www.regulations.gov>; or in person at the Docket Operations office between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (phone: 800-647-5527) is the same as the Mail address provided in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England

Executive Park, Burlington, MA 01803; phone: 781-238-7143; fax: 781-238-7199; e-mail: alan.strom@faa.gov.

SUPPLEMENTARY INFORMATION:

Discussion

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA AD 2012-0051, dated March 26, 2012 (referred to after this as “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Flight Profiles (FP) define the limits of engine operation within which the engine will qualify for use of an associated set of Critical Parts life limits. The Rolls-Royce RB211-Trent 800 engine previously had seven such FPs and associated sets of life limits published in the RR Time Limits Manual.

However, the results of a recent review of operational flight data determined that the existing FPs do not encompass the full range of Trent 800 operations. To account for the consequent increased rate of fatigue life usage on the life limited Critical Parts, a new FP and associated set of reduced life limits for Critical Parts has been developed, defined as FP “MAX”, that defines a new level of operation which is outside the “HEAVY” FP, previously the most arduous.

We are issuing this AD to prevent the failure of critical rotating parts, which could result in uncontained failure of the engine and damage to the airplane. You may obtain further information by examining the MCAI in the AD docket.

FAA’s Determination and Requirements of this AD

This product has been approved by the United Kingdom and is approved for operation in the United States. Pursuant to our bilateral agreement with the European Community, EASA has notified us of the unsafe condition described in the MCAI and service information referenced above. We are issuing this AD because we evaluated all

information provided by EASA and determined the unsafe condition exists and is likely to exist or develop on other products of the same type design.

FAA's Determination of the Effective Date

An unsafe condition exists that requires the immediate adoption of this AD. The FAA has found that the risk to the flying public justifies waiving notice and comment prior to adoption of this rule because some parts may require immediate removal upon recalculation of the part lives in accordance with the AD. Therefore, we determined that notice and opportunity for public comment before issuing this AD are impracticable and that good cause exists for making this amendment effective in fewer than 30 days.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not precede it by notice and opportunity for public comment. We invite you to send any written relevant data, views, or arguments about this AD. Send your comments to an address listed under the ADDRESSES section. Include "Docket No. FAA-2012-0418; Directorate Identifier 2012-NE-12-AD" at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact with FAA personnel concerning this AD. Using the search function of the Web site, anyone can find and read the comments in any of our dockets, including, if provided, the name of the individual

who sent the comment (or signed the comment on behalf of an association, business, labor union, etc.). You may review the DOT's complete Privacy Act Statement in the Federal Register published on April 11, 2000 (65 FR 19477-78).

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

We determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this AD:

1. Is not a "significant regulatory action" under Executive Order 12866;

2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and

3. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

4. We prepared a regulatory evaluation of the estimated costs to comply with this AD and placed it in the AD docket.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by adding the following new AD:

2012-11-01 **Rolls-Royce plc**: Amendment 39-17064; Docket No. FAA-2012-0418;

Directorate Identifier 2012-NE-12-AD.

(a) Effective Date

This airworthiness directive (AD) becomes effective [Insert date 15 days after date of publication in the FEDERAL REGISTER].

(b) Affected ADs

None.

(c) Applicability

This AD applies to Rolls-Royce plc (RR) RB211-Trent 875-17, 877-17, 884-17, 884B-17, 892-17, 892B-17, and 895-17 turbofan engines.

(d) Reason

This AD was prompted by RR adding a new flight profile and an associated set of life limits. We are issuing this AD to prevent the failure of critical rotating parts, which could result in uncontained failure of the engine and damage to the airplane.

(e) Actions and Compliance

Compliance is required within 30 days after the effective date of this AD, unless already done.

(f) After the effective date of this AD, remove from service the parts listed by part number (P/N) in Table 1 of this AD before exceeding the new life limit indicated.

Table 1 – Reduced Part Lives – Life in Cycles Using the MAX Profile

Part Nomenclature	P/N	New Life Limit in MAX Profile Cycles
(1) Low-pressure (LP) Compressor Rotor Disc	FK14399, FK30901	10,080
(2) LP Compressor Rotor Shaft	FK20840	7,950
(3) Intermediate-pressure (IP) Compressor Rotor Shaft	FK24100, FK24496	8,140
(4) IP Rear Shaft	FK23564, FW18545	15,000
(5) High-pressure (HP) Compressor Stage 1 to 4 Rotor Discs Shaft	FK24009	MAX profile cycles prohibited
(6) HP Compressor Stage 1 to 4 Rotor Discs Shaft	FK26167, FK32580, FW88724	4,500
(7) HP Compressor Stage 1 to 4 Rotor Discs Shaft	FW11590, FW61622, FW88723, FW88725	6,000
(8) HP Compressor Stage 5 and 6 Discs and Cone	FK25230, FK27899	4,500
(9) HP Compressor Stage 5 and 6 Discs and Cone	FW24633	5,800
(10) HP Compressor Stage 5 and 6 Discs and Cone	FW24634	5,060
(11) HP Turbine Rotor Disc	FK24651, FK24790	4,500
(12) HP Turbine Rotor Disc	FK26893	5,540
(13) IP Turbine Rotor Disc	FK21117, FK33049	8,400
(14) IP Turbine Rotor Disc	FK33083	MAX profile cycles prohibited
(15) IP Turbine Rotor Shaft	FK23295, FK25180, FW18550, FW19626	10,380
(16) LP Turbine Stage 1 Rotor Disc	FK24971	15,000
(17) LP Turbine Stage 2 Rotor Disc	FK23208, FK26625	15,000
(18) LP Turbine Stage 3 Rotor	FK24199, FK26626	15,000

Part Nomenclature	P/N	New Life Limit in MAX Profile Cycles
Disc		
(19) LP Turbine Stage 4 Rotor Disc	FK23210	15,000
(20) LP Turbine Stage 5 Rotor Disc	FK24200	15,000
(21) LP Turbine Rotor Shaft	FK20817	7,360

(g) Installation Prohibition

After the effective date of this AD, do not install any IP turbine rotor discs, P/N FK33083, into any engine.

(h) Alternative Methods of Compliance (AMOCs)

The Manager, Engine Certification Office, FAA, may approve AMOCs to this AD. Use the procedures found in 14 CFR 39.19 to make your request.

(i) Related Information

(1) You may find additional information on calculating MAX Profile Cycles, in RB211 Trent 800 Propulsion Systems Alert Service Bulletin (ASB) No. RB.211-72-AG801 and RR Time Limits Manual 05-00-01-800-801, Recording and Control of the Lives of Parts.

(2) For more information about this AD, contact Alan Strom, Aerospace Engineer, Engine Certification Office, FAA, Engine & Propeller Directorate, 12 New England Executive Park, Burlington, MA 01803; phone: 781-238-7143; fax: 781-238-7199; e-mail: alan.strom@faa.gov.

(3) Refer to European Aviation Safety Agency Airworthiness Directive 2012-0051, dated March 26, 2012, and RB211 Trent 800 Propulsion Systems ASB No. RB.211-72-AG801, dated December 8, 2011, for related information.

(4) For service information identified in this AD, contact Rolls-Royce plc, Corporate Communications, P.O. Box 31, Derby, England, DE248BJ; phone: 011-44-1332-242424; fax: 011-44-1332-245418 or e-mail from http://www.rolls-royce.com/contact/civil_team.jsp.

(i) Material Incorporated by Reference

None.

Issued in Burlington, Massachusetts, on May 16, 2012.

Peter A. White,
Manager, Engine & Propeller Directorate,
Aircraft Certification Service.

[FR Doc. 2012-13081 Filed 05/30/2012 at 8:45 am; Publication Date: 05/31/2012]